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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,411	07/13/2001	Dieter Groitzsch	22750/484	4738

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EXAMINER

PIERCE, JEREMY R

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/905,411

Applicant(s)

GROITZSCH ET AL.

Examiner

Jeremy R. Pierce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite the nonwoven fabric has a "density" and that density is measured in "g/m<sup>2</sup>." However, density in fabrics is made in units such as g/m<sup>3</sup>, and not g/m<sup>2</sup>. The claimed unit of measure is more in line with a "basis weight" measurement of the fabric. Density cannot be measured over two dimensions, since it is a measure of weight per unit of volume, not area. Is Applicant claiming density or basis weight?

The claims also recite that a textured multifilament yarn is "shot through the fabric." The claims additionally recite the yarns have "mesh number," which according to Applicant's specification, means "the number of stitches in the warp direction" (page 4, lines 30-31). Is the yarn shot through the nonwoven fabric, or are they stitched to the nonwoven fabric? The drawings create further confusion. Looking at Figures 1-3, it does not appear that the yarns actually go "through" the fabric, but are actually attached to one side of the nonwoven fabric. Are they stitched to one side of the fabric? Are they shot through the middle of the fabric, and then stitched? Additionally, Applicant does not describe what "stitching" means in the specification. Would a point of bonding

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(i.e. thermal or adhesive bonds) between the yarn and the nonwoven fabric constitute a "stitch?" Since Applicant does not describe a stitch, the Examiner will assume that a point where the yarn is attached to the nonwoven fabric, whether by adhesive, thermal bonding, or stitching with a separate fiber, will satisfy the limitation for "mesh number." Also, since it is not clear whether the yarns are located in the middle of the nonwoven fabric, or on one side of it, the Examiner will assume that either will meet the claimed limitations.

Claim 10 recites the limitation "synthetic fibers and/or filaments" in line 2. There is insufficient antecedent basis for this limitation in the claim. Should claim 10 be dependent from claim 9, rather than claim 8?

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 6, 14, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Wildeman (U.S. Patent No. 6,521,554).

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Wildeman discloses a nonwoven substrate that has a basis weight of 50 to 200 gsm (column 2, line 1). A multifilament polyester yarn having a denier between 50 and 150 is stitch bonded into the backside of the fabric (column 1, lines 26-31). The yarns can be separated from one another by at least 14/inch to 28/inch (column 2, lines 12-14), which equals approximately 5.5/cm to 11/cm. The stitch density may range from 8/inch to 30/inch (column 2, lines 13-15), which equals approximately 3.1/cm to 12/cm. The multifilament threads are shrunk from 5% to about 10% (column 2, lines 32-37). With regard to claim 6, the nonwoven web contains fibers having a denier from 2 to 6 (column 1, lines 65-67). With regard to claim 14, the front side of the nonwoven substrate has a different type of yarn stitchbonded to its surface (column 2, lines 19-24).

5. Claims 1-7, 9, 14, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Zafiroglu (U.S. Patent No. 5,203,186).

Zafiroglu discloses a stitchbonded nonwoven fabric. The nonwoven fabric has a basis weight in the range of 10 to 300 grams per square meter (column 2, lines 35-36). Bulkable textured yarns (column 2, line 58) are attached 2 to 10 rows per centimeter with stitch spacing of 2 to 15 per centimeter (column 2, lines 37-39). The bulkable threads are reduced by 5 to 80% (column 3, lines 7-8). With regard to claims 3-5, Zafiroglu teaches that the nonwoven fabric may be bonded (column 3, line 37) and that bonding the web improves fabric stability and durability (column 1, lines 30-32). In Example 5, the nonwoven is pattern bonded with 625 points per square inch (column 11, lines 1-5). The points have a diameter of 0.02 inches, so each point has an area of 0.000314 square inches, which when multiplied by 625, equals approximately 0.2

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square inches of bonding area per square inch. Therefore, Zafiroglu teaches the patten to cover 20% of the surface. With regard to claim 6, Zafiroglu disclose the fibers of the nonwoven to be within Applicant's claimed titer range (see Examples). With regard to claim 7, Zafiroglu discloses the temperature to bulk the yarns is 50 to 200 degrees C (column 3, lines 50-53), which would be at least 25 degrees less than the plastification range of the nonwoven fibers. With regard to claim 9, Zafiroglu discloses the nonwoven fabric may comprise wood pulp (Example 3). With regard to claim 14, Zafiroglu discloses the two surfaces may be different (column 4, lines 36-49).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wildeman.

Wildeman does not disclose the yarn to be triggered at least 25 degrees C below the plastification temperature of the filaments in the nonwoven fabric. In one embodiment, Wildeman discloses binder fibers that melt at the same temperature as the yarn shrinks (column 5, lines 44-60). However, Wildeman only discloses the use of binder fibers as optional (column 4, lines 7-11). If binder fibers are not included, it can be assumed that Wildeman would not have the nonwoven contain fibers that melted

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while shrinking the yarns. Wildeman teaches that when binder fibers are used in the form of bi-component fibers, the core has a melting temperature at least 80 degrees C higher than the sheath (column 4, lines 32-37). When creating the embodiment of Wildeman that does not include binder fibers, it would be obvious to a person having ordinary skill in the art to use a yarn that shrinks at least 25 degrees C below the plastification temperature of the filaments of the nonwoven fabric, so that the fibers of the nonwoven do not unnecessarily form thermal bonds. With regard to claim 12, Wildeman includes fibers that are crimped (column 2, line 25), but does not mention using dye. However, Wildeman do disclose that the fabric is to be used as covering upholstery (column 1, lines 11-12). It would have been obvious to one having ordinary skill in the art to include dye in the fibers, so that the fabric would have better aesthetics for its use as an upholstery cover. With regard to claim 15, it would be obvious to one having ordinary skill in the art to fold the fabric in order to store it more conveniently before use.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wildeman in view of Chang et al. (U.S. Patent No. 4,540,497).

Wildeman does not teach impregnating the fabric with silicone oil lubricant. Chang et al. disclose treating fibers of an upholstery fabric with silicone oil to provide lubrication (column 9, line 4 –column 10, line 1). It would have been obvious to one having ordinary skill in the art to apply silicone oil to the fabric of Wildeman in order to lubricate the fibers, as taught by Chang et al.

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9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wildeman in view of Kemerer (U.S. Patent No. 4,708,807).

Wildeman does not teach impregnating the fabric with a cleaning emulsion. Kemerer teaches applying a cleaning composition to upholstery fabric (column 6, lines 52-68). It would have been obvious to one having ordinary skill in the art to apply cleaning composition to the fabric of Wildeman in order to keep it clean for use in upholstery, as taught by Kemerer.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zafiroglu.

Zafiroglu do not disclose folding the fabric. It would be obvious to one having ordinary skill in the art to fold the fabric in order to store it more conveniently before use.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zafiroglu in view of Nischwitz et al. (U.S. Patent No. 4,136,218).

Zafiroglu does not disclose the synthetic fibers to be hydrophilic. Nishchwitz et al. disclose a process for making synthetic fibers hydrophilic (Abstract). It would have been obvious to one having ordinary skill in the art to make the synthetic fibers of Zafiroglu hydrophilic in order to increase the absorbent capacity of the nonwoven fabric for better use as a baby wipe or scouring pad.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zafiroglu in view of Srinivasan et al. (U.S. Patent No. 5,500,281).

Zafiroglu do not include superabsorbent fibers in the nonwoven fabric. Srinivasan et al. disclose including superabsorbent fibers can greatly increase fluid



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holding capacity in diapers, wipes, and sanitary napkins (column 11, lines 29-35). It would have been obvious to one having ordinary skill in the art to incorporate superabsorbent fibers in the nonwoven of Zafiroglu in order to increase the fluid holding capacity for better use as a wipe, as taught by Srinivasan et al.

13. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zafiroglu in view of Cabell et al. (U.S. Patent No. 5,908,707).

Zafiroglu do not disclose using a cleaning emulsion or silicone oil in the nonwoven fabric. Cabell et al. teach that impregnating a wipe with a cleaning emulsion can provide increased benefits in cleaning (column 2, lines 44-61). Cabell et al. also include using silicone oil as a lubricant for the fibers (column 11, line 37). It would have been obvious to one having ordinary skill in the art to incorporate a cleaning emulsion into the wipe of Zafiroglu in order to gain increased cleaning benefits and silicone oil in order to lubricate the fibers, as taught by Cabell et al.

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zafiroglu in view of Zafiroglu (U.S. Patent No. 5,041,255).

The '186 patent does not disclose stretching the nonwoven fabric. Zafiroglu's '255 patent discloses stretching stitchbonded fabrics in order to decrease stiffness and increase bulk (Abstract). It would have been obvious to one having ordinary skill in the art to stretch the stitchbonded fabric of the '186 patent in order to increase bulk and decrease stiffness, as taught by the '255 patent.

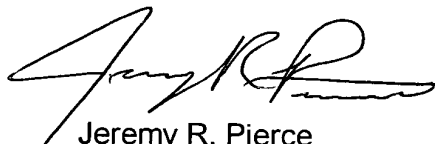
### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703) 605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

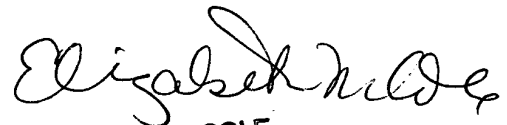
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeremy R. Pierce  
Examiner  
Art Unit 1771

May 1, 2003



ELIZABETH M. COLE  
PRIMARY EXAMINER

~~ELIZABETH M. COLE~~  
~~PRIMARY EXAMINER~~